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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/563,157	01/04/2006	Michiya Takemoto	281014US2PCT	8376
22850	7590	02/26/2009		
OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314			EXAMINER ANWAR, MOHAMMAD S	
			ART UNIT 2416	PAPER NUMBER
			NOTIFICATION DATE 02/26/2009	DELIVERY MODE ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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<i>Office Action Summary</i>	Application No.	Applicant(s)	
	10/563,157	TAKEMOTO ET AL.	
	Examiner	Art Unit	
	MOHAMMAD ANWAR	2416	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 January 2009.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed on 1/27/09 have been fully considered but they are not persuasive. See remarks below:

In regards to applicant argument, history management unit that stores a history of request increments as the difference between request amount and an allocation amount is addressed in the newly cited reference (Rodriguez et al.)

In reference to applicant argument, station side could be Base Station which is mentioned in Spinar et al. reference (paragraph 19 line 1).

2. All specification and claim objections are hereby withdrawn.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-5 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinar et al. (U.S. PGPub. No. 2002/0080816) in view of Rodriguez et al. (U.S. Patent No. 6,986,156)

For claim 1, , Spinar et al. disclose a station-side communicating apparatus (see paragraph 58 that performs one-to-N communication with a plurality of subscriber devices via a time-division-multiple- access line (see paragraph 19 lines 1-3; paragraph 49 lines 21-23), and controls allocation of upload bandwidth shared by the subscriber devices by acquiring bandwidth request amount from the subscriber devices (see paragraph 63 lines 29-30), the station-side communicating apparatus comprising: an allocation determining unit (see Figure 16(1670)) that determines a bandwidth allocation for each of the subscriber devices in each data-collection cycle (see paragraph 63 lines 9-23), and presents bandwidth request amount to be a target bandwidth request amount for the allocation determination to the allocation determining unit by dividing the bandwidth request amount into a plurality of request increments

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indicated by the history (see paragraph 117 lines 28-34). Spinar et al. disclose all the subject matter but fails to mention a history managing unit that stores a history of a request increment as a difference between the bandwidth request amount acquired from more than one time of data collections and an allocation amount allocated by the allocation determining unit for the bandwidth request amount. However, Rodriguez et al. from a similar field of endeavor disclose a history managing unit that stores a history of a request increment as a difference between the bandwidth request amount acquired from more than one time of data collections (see column 19 lines 20-26, which shows data collected over a period of time to determine the history of increment) and an allocation amount allocated by the allocation determining unit for the bandwidth request amount (see column 19 lines 6-17). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rodriguez et al. historical data management scheme into Spinar et al. bandwidth allocation scheme. The method can be implemented in bandwidth allocation manager. The motivation of doing this is to allocate bandwidth based on the allocation criteria (see column 3 lines 54-56).

For claim 2, Spinar et al. disclose the allocation determining unit detects a boundary between packet data size based on the request increments in the bandwidth request amount that is presented by the history managing unit for each of the subscriber devices, and executes the bandwidth allocation for allocates a portion of the bandwidth request amount as the bandwidth allocation based on the packet data size (see paragraph 92 lines 17-22).

For claim 3, Spinar et al. disclose the allocation determining unit detects a boundary between the request increments in the bandwidth request amount that is presented by the history managing unit for each of the subscriber devices, and determines the allocation amount from the request increments when executing the bandwidth allocation for a portion of the bandwidth request amount (see paragraph 122 lines 13-15 each connection is given a portion based on the allocation criteria and history).

For claim 4, Spinar et al. disclose wherein when executing the bandwidth allocation for a portion of the bandwidth request amount by detecting a boundary between the request increments in the bandwidth request amount that is presented by the history managing unit for each of the subscriber devices (see paragraph 181 lines 1-24), if the bandwidth request amount has a remaining portion for which the allocation is not performed in a present bandwidth-update cycle (see paragraph 122 lines 9-15), the allocation determining unit determines a bandwidth to be allocated to a corresponding subscriber device in a next bandwidth-update cycle in advance using the remaining portion (see paragraph 127 lines 1-7; paragraph 76 lines 7-10, paragraph 166 lines 36-37).

For claim 5, Spinar et al. disclose the allocation determining unit sequentially determines the allocation for the request increments in the bandwidth request amount that is presented by the history managing unit for each of the subscriber devices from an oldest request increment (see paragraph 187 lines 1-20). Spinar et al. disclose all the subject matter but fails to mention wherein the history managing unit manages,

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when taking the history for each of the subscriber devices, a temporal variation of the bandwidth request amount and disposes the request increments in the bandwidth request amount to be presented to the allocation determining unit in such a manner that a temporal relation is recognizable between the request increments, based on the temporal variation of the bandwidth request amount. However, Rodriguez et al. from a similar field of endeavor disclose wherein the history managing unit manages, when taking the history for each of the subscriber devices, a temporal variation of the bandwidth request amount (see column 19 lines 9-10) and disposes the request increments in the bandwidth request amount to be presented to the allocation determining unit in such a manner that a temporal relation is recognizable between the request increments, based on the temporal variation of the bandwidth request amount (see column 19 lines 11-15 an analysis of request increments per week, time of day and year),. Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rodriguez et al. historical data management scheme into Spinar et al. bandwidth allocation scheme. The method can be implemented in bandwidth allocation manager. The motivation of doing this is to allocate bandwidth based on the allocation criteria (see column 3 lines 54-56).

For claim 8, Spinar et al. disclose wherein the allocation determining unit classifies the request increments in the bandwidth request amount that is presented by the history managing unit for each of the subscriber devices into a plurality of groups with different priorities based on contract differences with respect to the subscriber devices, and executes the bandwidth allocation for the request increments from a group

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with a higher priority (see paragraph 126 lines 11-18, paragraph 43 lines 1-14, paragraph 116 lines 12-16).

7. Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Spinar et al. in view of Rodriguez et al. as applied to claim 1 above, and further in view of Wright et al. (U.S. Patent No. 6,078,568).

For claim 6, Spinar et al. disclose all the subject matter but fails to mention wherein the history managing unit manages, a temporal variation of the bandwidth request amount, based on the temporal variation of the bandwidth request amount. However, Rodriguez et al from a similar field of endeavor disclose wherein the history managing unit manages, a temporal variation of the bandwidth request amount, based on the temporal variation of the bandwidth request amount (see column 19 lines 11-15 an analysis of request increments per week, time of day and year),. Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rodriguez et al. historical data management scheme into Spinar et al. bandwidth allocation scheme. The method can be implemented in bandwidth allocation manager. The motivation of doing this is to allocate bandwidth based on the allocation criteria (see column 3 lines 54-56). Spinar et al. and Rodriguez et al. disclose all the subject matter but fails to mention detects a transmission delay time of a packet data remains in the subscriber device. However, Wright et al. discloses and detects a transmission delay time of a packet data remains in the subscriber device. However, Wright et al from a similar field of endeavor disclose detects a transmission delay time of a packet data

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remains in the subscriber device (see column 6 lines 59-62). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Wright et al. transmission delay time scheme into Spinar et al. and Rodriguez et al. bandwidth allocation scheme. The method can be implemented in a transmission unit. The motivation of doing this is to efficiently utilize the data packet transmission.

For claim 7, Spinar et al. disclose all the subject matter but fails to mention wherein the history managing unit manages when taking the history for each of the subscriber devices a temporal variation of the bandwidth request amount. However, Rodriguez et al from a similar field of endeavor disclose wherein the history managing unit manages, a temporal variation of the bandwidth request amount, based on the temporal variation of the bandwidth request amount (see column 19 lines 11-15 an analysis of request increments per week, time of day and year),. Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Rodriguez et al. historical data management scheme into Spinar et al. bandwidth allocation scheme. The method can be implemented in bandwidth allocation manager. The motivation of doing this is to allocate bandwidth based on the allocation criteria (see column 3 lines 54-56). Spinar et al. and Rodriguez et al. disclose all the subject matter but fails to mention detects a transmission delay time is large. However, Wright et al. discloses and detects a transmission delay time is large (see column 6 lines 59-62). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Wright et al. transmission delay time scheme into Spinar et al. and Rodriguez et al. bandwidth allocation scheme. The method can be implemented in the

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transmission unit. The motivation of doing this is to efficiently utilize the data packet transmission.

8. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being anticipated over Spinar et al. in view of background of Zimmerman et al. (U.S. Patent No. 6,785,252 B1).

For claims 9 and 10, Spinar et al. disclose a history managing unit that determines a first non-allocation amount (see Figure 12A, 1232, BW available which is non-allocated) as a difference between a first bandwidth request from a subscriber device (see Figure 13, 1318) in the plurality of subscriber devices (see Figure 13, 1310, 1320, 1330) and a first allocation amount allocated in response to the a second non-allocation amount as a difference between the second bandwidth request (see Figure 13, 1328) and a second allocation amount allocated in response to the second bandwidth request (see Figure 13, 1340). Spinar et al. disclose all the subject matter but fails to mention a first request increment as a difference between a second bandwidth request from the subscriber and the first non-allocation amount, a second request increment as a difference between a third bandwidth request and the second non-allocation amount; and an allocation determining unit that determines a third allocation amount for the subscriber device based on the first request increment, the second request increment, and the third bandwidth request from the subscriber device. However, Zimmerman et al. from a similar of endeavor disclose an incremental data request and grant scheme, a first request increment as a difference between a second bandwidth request from the subscriber and the first non-allocation

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amount (see column 5 lines 9-27, a method is described for first request increment), a second request increment as a difference between a third bandwidth request (see column 5 lines 9-27, a method is described for request increment) and the second non-allocation amount; and an allocation determining unit that determines a third allocation amount for the subscriber device based on the first request increment, the second request increment, and the third bandwidth request from the subscriber device (see column 5 lines 38-40). Thus, it would have been obvious to one ordinary skill in the art at the time of invention was made to include Zimmerman incremental scheme into Spinar et al. bandwidth allocation scheme. The method can be implemented in a bandwidth allocation device. The motivation of doing this is to efficiently allocate bandwidth (see column 2 lines 59-60).

Conclusion

1. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MOHAMMAD ANWAR whose telephone number is (571)270-5641. The examiner can normally be reached on Monday-Thursday, 9am-4pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derrick W. Ferris can be reached on 571-272-3123. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MOHAMMAD ANWAR
Examiner
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/M. A./

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/Derrick W Ferris/

Supervisory Patent Examiner, Art Unit 2416